



PROGRESS REPORT NO. 181

TO: Robert Tan, U.S. Environmental Protection Agency (EPA) – via electronic mail
Bonnie Arthur, EPA – via electronic mail

FROM: Denise Mills, Teck American Incorporated (TAI)

Cc: Kris McCaig, TAI – via electronic mail
Rob Orr, TAI – via electronic mail

DATE: August 10, 2021

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RE: Upper Columbia River (UCR) Remedial Investigation/Feasibility Study
(RI/FS) – Progress Report No. 181 Month Ending July 2021

Pursuant to Paragraph 39 of the June 2, 2006 Settlement Agreement (Agreement), the following is intended to provide a summary of activities completed during the past month in compliance with the Agreement. It is also intended to provide a brief summary of pending and on-going activities.

Soil Amendment Technology Evaluation Study (SATES):

TAI submitted the draft Phase II Data Summary Report (DSR) on May 17, 2021. TAI submitted a separate statistical analysis technical memorandum on July 16, 2021, which provides an evaluation of the bench-scale treatability testing results. TAI has scheduled a call with EPA and the SATES technical team on August 9, 2021 to review and discuss the Phase II testing results.

The first Phase IV soil sampling event was conducted from May 17 through May 21, 2021. The second soil sampling event was conducted from July 20 – 22, 2021.

Baseline Ecological Risk Assessment (BERA) – TAI submitted the pre-draft terrestrial BERA (the Draft Interim Partial Upland BERA) to EPA on June 24, 2021. Upon completion of EPA's review and following TAI's receipt of EPA's feedback on the pre-draft BERA, TAI will provide a response to EPA comments for discussion with EPA. TAI coordinated with EPA to schedule a call to discuss initial questions and feedback that may be developing during EPA's review of this pre-draft BERA.

Remedial Investigation (RI) Report – TAI submitted the pre-draft RI Report (the Draft Interim Partial Upland RI Report) to EPA on July 30, 2021. This pre-draft report is focused on the terrestrial areas of the UCR site and includes summaries of the Final Human Health Risk Assessment and the Draft Interim Partial Upland BERA. Upon completion of EPA's review and following TAI's receipt of EPA's feedback on the pre-draft RI report, TAI will provide a response to EPA comments for discussion with EPA.

2019 Phase 3 Sediment Study:

2019 Phase 3 Sediment Study DSR – TAI submitted the draft DSR to EPA for review and comment on December 23, 2020. TAI received comments from EPA on the draft DSR on March 2, 2021, and submitted responses to those comments and a Draft Final 2019 Phase 3 Sediment Study DSR to EPA for review and approval on April 1, 2021. TAI received comments on the draft final Phase 3 Sediment Study DSR on June 4, 2021, and submitted responses to EPA's June 4 comments and the revised draft final DSR to EPA on July 6, 2021 for review and approval.

Split Sediment and Porewater Chemistry Analyses – TAI received EPA's initial draft interlaboratory split sample comparison and evaluation memorandum via email on June 16, 2020. TAI reviewed the memo and provided comments to EPA on July 14, 2020. Subsequently, EPA requested and TAI provided additional sample splits for analysis in accordance with the EPA's Phase 3 Sediment Study Split Sample Chemistry Quality Assurance Project Plan Addendum that was finalized on September 21, 2020. On May 7, 2021, at EPA's request, EPA and TAI participated on a call with EPA's contract laboratory and TAI's contracted laboratory to discuss the results of the additional sample analyses to assist EPA in completing the revised draft split sample interlaboratory comparison and evaluation memorandum for the Phase 3 split sample program. TAI is awaiting EPA's revised sediment and porewater split sample chemistry analyses data validation and comparison memorandum for field-collected sediment and porewater samples collected during the 2019 Phase 3 sediment study.

Bioassay Testing – TAI received total recoverable metals data from the U.S. Geological Survey Columbia Environmental Research Center (CERC) for the 2019 Phase 3 sediment study bioassay split sample program on January 8, 2021, and total organic carbon data from the CERC bioassay split sample analyses on February 2, 2021; these data were provided concurrently to TAI and EPA. On March 31, 2021, TAI received EPA's Data Validation Report for CERC chemistry data for the bioassay split sample program. TAI provided comments to EPA on the Data Validation Report on April 23, 2021. Calls were held between EPA and TAI on April 30 and June 16, 2021 to review and discuss TAI's and EPA's respective analyses of the Phase 3 bioassay quartz sand control performance and results. TAI received from EPA a technical memorandum on July 19, 2021, titled Phase 3 Sediment Study 42-day *Hyalella azteca* Bioassay Quartz Sand Negative Control Performance Evaluation, summarizing EPA's analysis of the quartz sand negative control performance and EPA's guidance on use and interpretation of the results. TAI will consider this information during development of the

forthcoming Phase 3 data analysis technical memorandum and pre-draft riverine BERA. TAI received EPA's Interlaboratory Split Sample Bioassay Comparison Memo on June 21, 2021 and the CERC Split Sample Bioassay Results memorandum on July 6, 2021, and provided comments to EPA on both memorandums on July 30, 2021.

Human Health Risk Assessment (HHRA) – TAI conducted a detailed review of UCR decision units where time-critical removal actions (TCRAs) and voluntary removal actions (VRAs) were completed in 2015 and 2017-2018, respectively. TAI identified discrepancies between the TCRA and VRA completion reports and how the TCRA and VRA information is summarized in the Final HHRA. TAI provided a summary of the discrepancies identified to EPA via email on July 20, 2021.

Should you have any questions or require any additional information, please do not hesitate to contact me at 509-623-4515.